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Taylor

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(54) SEALING MEMBER FOR USE IN NON-SIMMERING CLEAN SERVICE RELIEF VALVE

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- (52) **U.S. Cl.** CPC *F16K 3/243* (2013.01)
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F16L 23/22; F16K 17/003; F16K 17/025; F16K 17/0493; F16K 27/003; Y10T 29/49405; Y10T 29/4985; Y10T 29/4973

See application file for complete search history.

(56) References Cited

U.S. PATENT DOCUMENTS

854,135 A	5/1907	Whittemore
935,387 A	9/1909	Mastin
1,203,762 A	11/1916	Mastin
1,616,088 A	2/1927	Kinzel
1,940,924 A	12/1933	Taylor
2,249,127 A	7/1941	Goetze
2,327,837 A	8/1943	Williams
2,686,534 A	8/1954	Montelius
2,789,844 A *	4/1957	Kessler 285/336
2,828,238 A	8/1958	Batson et al.
2,892,644 A *	6/1959	Collins F16J 15/32
		251/324
2,898,167 A	8/1959	Tanner
2,940,803 A	6/1960	Phillips
3,110,471 A *	11/1963	Kuhles 251/318
3,207,179 A	9/1965	Klagues
3,290,003 A *	12/1966	Kessler 251/318
3,331,385 A	7/1967	Taylor
3,405,730 A	10/1968	Baumann
3,540,285 A	11/1970	Nicolau et al.
3,603,602 A	9/1971	Padula
3,762,685 A *	10/1973	Curran F16K 27/02
		137/454.6

(Continued)

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(57) ABSTRACT

Apparatus for forming a fluidic seal such as in a clean service relief valve. In accordance with some embodiments, a ring-shaped sealing member has an annular main body portion with an innermost surface at an innermost diameter, an outermost surface at an outermost diameter and opposing top and bottom flat surfaces which respectively extend between the innermost surface and the outermost surface. An annular first projection extends away from the top flat surface in a first direction, and an annular second projection extends away from the bottom flat surface in an opposing second direction.

12 Claims, 4 Drawing Sheets

